Jo Ann Goddard
Director
Federal Regulatory Relations

1275 Pennsylvania Avenue, N.W., Suite 400
Washington, D.C. 20004
(202) 383-6429

PACIFIC TELESIS
Group-Washington

July 25, 1994

William F. Caton
Acting Secretary
Federal Communications Commission
Mail Stop 1170
1919 M Street, N.W., Room 222
Washington, D.C. 20554

Dear Mr. Caton:

Re: *RM-8480, Amendment of Part 36 and Part 69 of the Commission's Rules to Effect Comprehensive Reform of the Access Charge System*

On behalf of Pacific Bell, please find enclosed an original and six copies of its *"Reply Comments"* in the above proceeding.

Please stamp and return the provided copy to confirm your receipt. Please contact me should you have any questions or require additional information concerning this matter.

Sincerely,

Jo Ann Goddard/AFC

Enclosures

No. of Copies rec'd 0+5
List ABCDE

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Amendment of Part 36 and	)	
Part 69 of the Commission's	)	RM-8480
Rules to Effect Comprehensive	)	
Reform of the Access Charge System	)	
	)	

REPLY COMMENTS OF PACIFIC BELL

Pacific Bell hereby submits its reply comments on the Petition for Rulemaking of the Ad Hoc Telecommunication Users Committee("Ad Hoc"). In support of its position, Ad Hoc submits a report, entitled Access and Competition: the Vital Link, prepared by Economics and Technology, Inc. (the "ETI Report").

Ad Hoc's Petition begins with a number of general contentions with which no one really disagrees, for example, that there is "a general consensus that changes in the now ten-year old access charge rules are required ... general agreement that the goal of access charge reform should be to move toward more cost-based pricing of access services and,

as actual levels of emerging competition may warrant,[1] increasing LEC pricing flexibility." (Ad Hoc, pp. 2-3.) From these general observations, as various parties who filed Comments have pointed out, Ad Hoc proceeds to some misleading conclusions. Ad Hoc's proposal is like Sir Peter Medawar's description of phrenology: it contains isolated nuggets of truth, but the general theory is false.[2]

One flawed premise of Ad Hoc's position is that "effective access charge reform is not feasible without fundamental separations reform." (Ad Hoc, p. 4.) As BellSouth points out, however, this is obviously false. (BellSouth, p. 4.) The rules that regulate AT&T's prices enjoyed wholesale reform without any changes in the separations rules. This is because in a competitive market, the only measure of cost that is relevant to the decision at hand is incremental cost. Incremental costs are not subject to jurisdictional preferences, but measure how economic costs

---

[1] We disagree, however, that access reform should wait until "actual levels of competition may warrant" it. As Professor Harris points out in the Reply Report on LEC Price Cap Reforms ("Harris Report") that we have attached to these Reply Comments, "the need for regulatory reform is based not only on the state of the market, but on the rate of change in the market" Harris Report, p. 3 (emphasis in original).

[2] P. B. Medawar, The Hope of Progress (London, 1972), p. 32.

will change or be incurred either under the status quo or with some specified changes. While separated costs may be relevant to the few remaining services that are not subject to competitive pressures, to require competitive services to reflect separated costs would destroy consumer welfare.

Yet Ad Hoc's substantive proposal is just a new way of separating costs: "JTM is simply a new separations mechanism." (ETI Report, p. 29; emphasis in original.) Ad Hoc doesn't provide a meaningful description of JTM, so it is impossible to analyze.[3] But to the degree that JTM continues the arbitrary cost allocations of the current rules, it is not a step forward.

In addition, as NARUC points out, any rule changes that result in separations impacts must be referred to a joint board for resolution. (NARUC, p. 8.) The result could be the miring of access reform in the joint board process.

This is not the proceeding in which to debate how much competition for our business exists now or will develop. As several commenting parties point out, these questions are being considered now in Docket 94-1. However, to rebut

[3] Although the ETI Report refers to JTM as something that is "described below" (ETI Report, p. 31), then one page later as "above" (ETI Report, p. 32), there's no beef in the middle.

various factual assertions that Ad Hoc has made (for instance, that "LECs [have] a 99.2% share of the national access services market," ETI Report, p. 2, n.7), we are attaching to these Reply Comments a report prepared by Professor Robert G. Harris and filed by the United States Telephone Association (USTA) in Docket 94-1 (the "Harris Report"). Anyone who seriously believes that LECs have 99.2% of the access charge market[4] must not be aware that the LECs have set prices $1.1 billion below the price caps.[5] As the Commission has elsewhere acknowledged,[6] this is not what rational monopolists would do. $1.1 billion in foregone revenues is prima facie evidence of lost market power.

To respond to these competitive pressures, we do agree that the EUCL and the CCLC should, at the option of the LEC, be rebalanced. (See Ad Hoc, p. 13, n.14.)

---

[4] Cf. Harris Report, pp. 12-19.

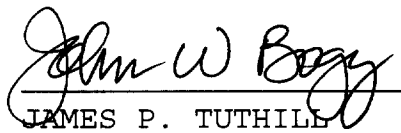
[5] Harris Report, p. 13.

[6] Price Cap Performance for AT&T, 8 FCC Rcd. 6768, 6970 (1993).

Except as we have noted above, we oppose the granting of Ad Hoc's Petition. Like all of the commenting parties, however, we believe there is a need for a comprehensive review of the current rules to adapt to competition and new technologies. The fullest record on access reform issues has been developed in Docket 94-1. Therefore, that is where they should be resolved.

Respectfully submitted,

PACIFIC BELL



JAMES P. TUTHILL
JOHN W. BOGY

140 New Montgomery St., Rm. 1530A
San Francisco, California 94105
(415) 542-7634

JAMES L. WURTZ

1275 Pennsylvania Avenue, N.W.
Washington, D.C. 20004
(202) 383-6472

Its Attorneys

Date: July 25, 1994

ATTACHMENT 1

Reply Report on LEC Price Cap Reforms:
United States Telephone Association

by

Robert G. Harris

ATTACHMENT 1

Reply Report on LEC Price Cap Reforms:
United States Telephone Association

by

Robert G. Harris

Reply Report on LEC Price Cap Reforms:

United States Telephone Association

by
Professor Robert G. Harris
University of California, Berkeley, and
Law & Economics Consulting Group, Inc

June 24, 1994

Federal Communications Commission

Notice of Proposed Rulemaking

In the Matter of
Price Cap Performance Review
for Local Exchange Carriers
CC Docket No. 94-1

A. INTRODUCTION

The report I submitted with the May 9 comments of the United States Telephone Association (USTA) in this proceeding encouraged the Commission to adopt progressive policy reforms that will:

- ***increase incentives for efficiency, innovation in new services, and appropriate investment in the National Information Infrastructure by local exchange carriers (LECs) and others;***
- ***shift the risks of investing in advanced communications technologies from ratepayers to shareholders of service providers;***
- ***ensure that all customers benefit from balanced, efficient competition in access services; and***
- ***facilitate responsiveness by access service providers to customers' needs and market demand.***

The report recommended that the Commission could best achieve these policy goals and serve the nation's interests in a healthy, vibrant telecommunications sector by adopting LEC price cap reforms that would:

- ***end earnings regulation (eliminate sharing, low-end adjustment and depreciation prescription);***
- ***remove obstacles to LECs' new access service offerings;***
- ***employ a productivity offset based on historical experience, with no additive factor;***
- ***embody competitively neutral principles in the regulation of pricing and new service offerings; and***
- ***incorporate transition mechanisms that facilitate adaptation to changing market conditions by allowing LECs increased flexibility as competition develops further.***

Unfortunately, but predictably, many parties filed comments urging the Commission to do, effectively, just the opposite: reduce incentives for LEC investment, efficiency and innovation and continue the anachronistic regulatory restraints that prevent LECs from meeting the access competition that is growing at a phenomenal rate. The prescriptions for "reactive" regulatory policies are unfortunate because they stand directly in the path of the National Information Infrastructure; at best they will slow the pace of change, at worst, they will impede it. The arguments for reactive policies are so predictable because they so directly benefit those who advance them: competitors who seek competitive advantage by advocating regulatory policies designed to inhibit real competition in access services.

This report, which supports the Reply Comments of the United States Telephone Association, explains why the Commission should reject the self-serving arguments of LEC competitors and adopt LEC price cap reforms in this proceeding. ***The rate of change is much too fast for the Commission to take a "wait and see" attitude, which inevitably means reacting to changes in the market after they have occurred. Instead, the Commission should implement adaptive policies that anticipate the direction of change and conform to those changes as they occur.***

The next four sections of this report address the need for, and benefits of, adaptive regulations and price cap reforms. Section B emphasizes the need for adaptive regulatory policies, given that change is occurring at an accelerating rate and the costs of regulatory lag are increasing. The policy reforms proposed by USTA have inherent adaptive qualities which would facilitate the transition to fully competitive telecommunications markets. Section C reviews the "effective competition" standards embodied in the Commission's cable rate regulations and explains why corresponding treatment of LECs is necessary. Section D briefly reviews the history of surface freight transport regulation -- a classic case of regulatory policies that caused great harm to the public interest by failing to adapt to evolving competitive conditions -- and warns the Commission against repeating those errors in local exchange and access competition policies. Section E explains how adaptive regulatory policies will promote the development of the National Information Infrastructure by providing the necessary incentives for private investment and by reducing the regulatory risks by adopting a transition strategy now for access competition policy.

Section F shows how the measures of competition used by cable operators, CAPs, and IXCs in their comments underestimate the true level of access competition faced by LECs. Section G is an attempt to update competitive conditions since my May 9 report. "Attempt" is the apt term because, before this report is filed, it too will be out of date, because competitors are emerging and expanding so quickly. Section H analyzes the comments of cable operators, competitive access providers (CAPs) and interexchange carriers (IXCs) from the perspective of "economic rent-seeking" by LEC competitors, whose policy recommendations are designed to promote the interests of competitors, rather than the public interest in competition. This section then contrasts the stark differences between the recent corporate actions and public statements of these competitors to their comments in this proceeding. At the same time that competitors are insisting that there is very little access competition, they are investing substantial sums, upgrading and expanding their networks and touting their bright futures. In addition, the extraordinarily rapid growth and market valuations of these companies belies their assertions here that they are at a substantial competitive disadvantage *vis á vis* LECs.

Section I counters the arguments of competitors that, before granting regulatory flexibility to LECs, the Commission should adopt numerous "transition conditions," many of which are not germane to this proceeding or are even beyond the Commission's authority. Section J articulates the importance of growing competition between LECs and cable systems operators for the regulation of each industry. Given the certain prospect of head-to-head cable-LEC competition in telecommunications and video delivery services, it is imperative that the Commission adopt consistent policies toward these two classes of competitors.

The next two sections address issues related to the price cap formula. Section K explains why the Commission should correct the productivity offset by lowering, not raising, it in the LEC price cap formula. Opponents' arguments that LECs are earning high profits is fallacious. LEC profits are not significantly higher than companies of comparable risk and competitive vulnerability. Moreover, reported LEC profits are upwardly biased, because they are based upon uneconomic depreciation rates. The productivity offset should be based solely on the historic rate of productivity gains. The additional .5% "consumer dividend" should be removed from the price cap formula. Through July 1, 1995, consumers have already received a "consumer dividend" of $975 million, and will continue to receive an annual dividend of $394 million from the embedded current rates. Section L explains that the common line adjustment formula should be eliminated because historic "total factor productivity" already incorporates the effects of growth.

Finally, Section M addresses the relevance of the "new institutional economics" to access reforms. The inferences and policy recommendations made by the Association for Local Telecommunications Services are directly at odds with the major theoretical findings of transactions cost analysis. As a complement to "structure-conduct-performance" analysis, transactions cost analysis fully supports liberalizing price caps and granting flexibility to LECs, and does not support the efforts of CAPs to gain artificial competitive advantage by imposing excessive regulatory requirements on LECs.

B. THE COMMISSION SHOULD ADOPT ADAPTIVE TRANSITION MECHANISMS NOW

Many of the commenters argue that the LECs' proposed reforms are premised -- or should be premised -- on full competition in access and local exchange services. That argument is wrong: ***the need for regulatory reform is based not only on the state of the market,[1] but on the rate of change in the market.*** LEC competitors would have the Commission maintain the regulatory controls of the past well into the future, even though LECs currently face a significant amount of competition for some services in some areas and the degree of competition is expected to grow at a rapid rate. While the current price cap policy of the Commission represents an improvement over traditional rate of return regulation, it retains much of the static character of traditional regulation. The prescription of depreciation, adherence to rate of return controls through earnings sharing, prohibitions on pricing flexibility and obstacles to new service introductions all serve to limit the adaptiveness of price caps to changing conditions.

When changes are occurring rapidly and at an accelerating rate, policies need to aim at a moving target. The Commission should be asking three fundamental questions: (1) what will the market look like a few years ahead? (2) what do we want the market to look like a few years ahead? and (3) what can and should the Commission do to promote the realization of that vision? The price cap reforms adopted now should be based on the answers to those questions, not "what did the market look like in the last year for which data are available?" Of course, regulators cannot know the future, but they can reasonably predict the direction and rate of change, because on those counts, there is great certainty: the direction of change is toward more competition; and the rate of change is fast.

For those reasons, the costs of regulatory lags and delays are increasing. The allocative inefficiency effects of lagging policies increase as entry continues to occur, and competition continues to increase. When LECs are required to charge prices that are at odds with the cost of and demand for services, competitors have benefited from and will continue to exploit their vulnerability by targeting the effected customers. Pricing inflexibility also causes technical inefficiency because distorted price signals cause customers to buy from higher cost providers. Moreover, pricing inflexibility causes dynamic inefficiencies by inducing uneconomic entry and investment, when a LEC could serve customers at a lower cost. Delays and obstacles to new service introductions also cause dynamic inefficiencies, by slowing the revenue streams from new

---

[1] Actually, the opponents of change do not even base their arguments on the current state of the market, but on the historical state of the market. They continually cite two, three or more year-old data to support their claims, knowing full well how misleading those data are given the accelerating changes that are occurring.

services, which lowers the present value of, and thereby investments in, new network technologies.

Commenters argue that, because the Commission cannot know exactly how the future will unfold, it should "wait and see," then act. One cannot imagine these same companies following that principle in developing and implementing their own corporate policies, for it is a premise sure to fail. Managers regularly plan and act toward the future; managers who merely react to events after they unfold take their companies down with them.

In any case, the idea that policy commitments made now must necessarily be predicated on knowledge of the future is wrong. Good policies -- whether corporate or public -- utterly depend on their ability to adapt to the future as events and conditions unfold. This is a simple architectural principle, applied to office buildings (movable walls, open access wiring conduits); personal computers ("plug and play" peripherals; central processing unit and software upgradeability); and telecommunications networks (modularity of switches; software upgrades to switches). In each of these cases, ***adaptive designs are replacing the "hard-wired" versions of days past precisely because the rate of change has increased so markedly***. When one cannot reasonably predict future office space needs and employee work functions, one designs buildings that can adapt to changing conditions. ***This architectural principle applies with no less force to designing price caps and access competition policies***.

Consider three of the major adaptive provisions of the USTA proposal:

- ending depreciation prescription and earnings sharing causes profitability to vary with a LEC's efficiency and market effectiveness (versus a static rate of return based on regulated depreciation rates and regulatory determination of cost of capital);
- removing delays and obstacles to new services enables LECs to better and more quickly respond to fast-changing market demands and customer needs (versus a regulatory determination of which new services should be approved);
- increasing the degree of LEC pricing flexibility by changing the classification of geographic areas or access services as competitive conditions warrant provides customers with more competitive alternatives (versus postponing the regulatory transition to competition to some uncertain date in the future).

By design, self-adapting policy mechanisms cannot "get ahead of the market"; the transition mechanism is designed to be implemented only when actual market conditions change. USTA's proposed market classification system does not change anything until a LEC can demonstrate that competitive conditions justify a reclassification under the system. Whether that happens now (because LECs already face competition for some services in some geographic areas) or later (as competition expands to other services and geographic areas), the classification mechanism automatically adapts to the situation. The Commission need not know exactly when the reclassification will occur in order to design and implement a system of reclassification now.

There are substantial benefits to acting in anticipation that competition will develop even further than it already has. ***By adopting a policy framework that will facilitate and accommodate changing technological, competitive and market conditions, the Commission will be sending valuable signals to investors, competitors and customers***. In areas where LECs already face competition, LECs can request to change their classification immediately and be

able to respond to competition. In addition, by establishing these self-adaptive mechanisms now, the Commission will reduce the degree of uncertainty and risk concerning the effects of increased future competition, giving competitors, potential entrants and customers the information they need to make long-term business decisions, such as long-lived capital investments and long-term supply contracts. Adoption of transition mechanisms can also help "fulfill the future." By adopting effective transition mechanisms now, the Commission would provide assurance that, as competition develops, LECs will be allowed increasing flexibility to respond and compete fairly.

C. THE "EFFECTIVE COMPETITION" STANDARD IN CABLE REGULATION IS A TRANSITION MECHANISM

In its cable rate regulation decisions, the Commission has adopted exactly the kind of transition mechanism that is needed in access services. The Cable Act of 1992 provides that, where a cable operator does not face effective competition, cable rates are to be regulated to protect the interests of subscribers. The premise of that Act, and the presumption of the Commission, is that, generally speaking, cable operators do not face effective competition, at least not for the "basic service tier" or the "cable programming service tier."

In its orders implementing the Cable Act, the Commission has developed a highly adaptive transition mechanism that anticipates, and provides for "automatic" change in regulatory policy as effective competition develops. The Commission decided to "presume that the cable operator is not subject to effective competition...," based on its finding that cable rates are significantly lower, on average, where effective competition exists than when it does not. The cable operator will then be required to rebut this presumption with evidence of effective competition. If and when a cable operator can demonstrate that it faces effective competition, it will be relieved of rate regulation.[2]

There are several aspects of the Commission's approach to cable regulation that are directly applicable to LEC price cap reforms. First, USTA proposes a similar, but much more modest transition mechanism to adapt regulation to competition as it develops. In the cable order, there is a simple dichotomy: if no effective competition, then rate regulation; if effective competition, then no regulation. USTA proposed three levels of classifying markets: Initial, Transition and Competitive. As a LEC can demonstrate that it faces sufficient competition to justify moving a market or service into a more competitive category, it would gain more flexibility commensurate with that level of competition.[3] Indeed, it is even more important that the LEC price cap plan provide for a regulatory transition to competition because competition in access services has already developed far further, and is developing far faster, than cable competition. Cable revenues are widely distributed across their potential customer base. Therefore, to compete effectively with a cable operator in a given franchise area, the new entrant has to make service available to most, if not all of the potential customers in that area. Access revenues, in contrast, are very highly concentrated, so an entrant can target a very large share of

---

[2] Report and Order and Further Notice of Proposed Rulemaking, MM Docket 92-266, May 3, 1994, par. 8, page 5669.

[3] USTA has not proposed complete deregulation of services under the transition mechanism; it is thus considerably more conservative that the cable approach, which provides for complete deregulation.

the potential revenues by serving only a very small percentage of the customers. The more highly revenues are concentrated in a market, the more vulnerable an incumbent is to entry.

Second, in assessing modes of competition to cable operators, the Commission takes an appropriately broad view. It considers not only cable "overbuilds," but also many other forms of "multi-channel video program distribution" as competitive to cable operators. The Commission specifically identifies video dialtone by local exchange carriers,[4] and satellite master antenna television service (SMATV) as offering effective competition to cable operators, if and when they become available to subscribers in a given franchise area. The Commission should, in designing an adaptive price cap plan for LECs, define competition broadly, to include any mode or means of serving customers' needs for access, whether functionally equivalent or not.

Third, the Commission correctly defines the geographic focus of effective competition as local. As argued by the National Cable Television Association, "regulation on a system-wide basis might have the effect of merging for regulatory purposes competitive and non-competitive franchise areas."[5] Thus, the Commission decided that "the effective competition determination will be made on a franchise-area basis," because for cable operators, the franchise area is the smallest geographic area for measuring costs or setting prices.[6] That finding is directly analogous to the USTA proposal for assessing access competition at the wire center or larger local geographic area. LECs face even more "localized" competition than cable operators do, because entrants target the most highly concentrated revenues and profits.

Fourth, the Commission's definition of "comparable programming" in assessing effective competition imposes a minimal requirement of just "twelve channels of programming, including at least one channel of non-broadcast service programming."[7] Given that most cable operators offer far more than twelve channels, often including many "premium" video services, it is instructive that the Commission did not require "equality" in number of channels for there to be effective competition. The Commission should likewise reject the argument of LEC competitors that there must be full competition in all local exchange and access services before there can be competition in any of these services.

Fifth, the Commission acknowledged that cable operators are disadvantaged in demonstrating effective competition because they "do not have access to information necessary to mount a meaningful challenge to the presumption of no competition." Hence, the Commission "will require competitors to respond within 15 days to requests from the cable

---

[4] Interestingly, the Commission finds that telephone companies "could establish significant competition to existing cable operators even though [they]... are generally prohibited under the Commission's cross-ownership rules from packaging and offering video programming directly to households." Ibid., par. 20, pp. 5649-50.

[5] Ibid., par. 49, pp. 5673-74.

[6] It should be noted, in this regard, that the size of a typical cable franchise area is much smaller than the franchise areas served by large LECs. That is why the wire center or other local market area is the appropriate focus for assessing competition in access services.

[7] Ibid., par. 38, pp. 5666-67.

operator for relevant information regarding reach and penetration if such information is not otherwise available."[8] The same problem exists, and a similar solution is appropriate, for a LEC to demonstrate that a local access market or service should be reclassified as more competitive. Currently, the LECs have far more extensive reporting requirements than their competitors, which greatly inhibits their ability to demonstrate the degree of competition they actually face (and enables competitors to continue to argue that there is little competition). To increase the adaptive capacity of its price cap reforms, the Commission should incorporate adequate reporting or access to relevant information on competition.

D. The Failure of the US Railroad Industry Was Due to Non-Adaptive Regulation

In the late 1970's and early 1980's, I was substantially involved in the transformation of transportation regulatory policies in the United States. My research on surface freight transportation was influential in the rationalization of the U.S. railroad industry and the adoption of progressive regulatory policies by the U.S. Congress and the Interstate Commerce Commission.[9] I served as an advisor to the U.S. Department of Transportation and the General Accounting Office on transportation legislation. From 1980-81, I was a Deputy Director at the Interstate Commerce Commission, where I played a leadership role in implementing the railroad and motor carrier regulatory reform acts passed by Congress in 1980. There are significant parallels between the policy changes in transportation then and the recent and pending policy changes in telecommunications now. In both cases, after several decades of stable regulatory policies that relied heavily on administrative controls, the nation opted to pursue a different course: the development and implementation of regulatory policies that promote competition and speed the transition from a heavily regulated environment to a less regulated competitive environment.

---

[8] Ibid., par. 44, pp. 5670.

[9] See, for example, the following articles and papers by Robert G. Harris, all of which addressed the benefits of rationalizing the rail freight industry and public policies toward the industry:

"Revitalization of the U.S. Freight Industry: An Organizational Perspective," International Railway Economics, edited by K. Button & D. Pitfield; Crower, London: 1985 (with Curtis M. Grimm).

"Structural Economics of the U.S. Rail Freight Industry: Concepts, Evidence and Merger Policy Implications," Transportation Research, 17A(4), July 1983 (with Curtis M. Grimm).

"Potential Benefits of Rail Mergers: An Econometric Analysis of Network Effects on Service Quality," Review of Economics and Statistics, 65(1), February 1983 (with Clifford Winston).

Rationalizing the Rail Freight System: Costs and Benefits of Branch Line Abandonments. U.S. Department of Transportation, Washington, D.C.: 1981.

"Determinants of Railroad Profitability: An Econometric Study," Economic Regulation: Essays in Honor of James R. Nelson, William G. Shepherd and Kenneth D. Boyer (eds.); Michigan State University Press, 1981 (with Theodore E. Keeler).

"Rationalizing the Physical Structure of the U.S. Rail Freight Industry," National Railroad Policy, Joint Economic Committee, U.S. Congress. Washington, D.C.: Government Printing Office, 1979.

The record of the success of surface freight transportation under reformed regulatory policies came, unfortunately, much too late. Indeed it was the drastic failures of non-adaptive regulatory policies which generated the force for finally changing policies in the late 1970's and early 1980's.[10] By the 1970's, the US railroad industry was in financial and physical ruin. Approximately half of the rail mileage was owned by carriers in bankruptcy. In addition to billions of dollars in Federal subsidies to protect essential rail services and bail out bankrupt carriers, there was an enormous negative effect on workers, communities and investors, due to the long-term decline of rail service. The impact on the regional economies of the Northeast and the Midwest was especially devastating.

While many observers cited the "natural decline" of railroads as a competitively viability industry, unable to compete with motor carriers, water carriers and pipelines, the current health of the rail freight industry belies that explanation. The decline was caused by obsolete regulatory policies, thanks in no small part to the major competitor of railroads, the trucking industry. In one proceeding after another, motor carriers argued strenuously that railroads should be prevented from responding to truck competitors, because that would harm competitors. Truckers argued that rail carriers should price at or above "fully distributed costs," even though railroad's incremental costs on traffic they were losing to trucks was far lower.[11]

The Interstate Commerce Commission was, frankly, blinded by an anachronistic view of the railroads as "monopolies," eager and able to destroy their highway competitors unless regulators stood vigilant by preventing rail carriers from pricing their services economically and by inhibiting the development of new rail services. In reality, the trucking companies rapidly stole the most profitable, high valued traffic, leaving the railroads to serve unprofitable customers and low density rural areas. Regulators failed to allow railroads pricing flexibility in response to growing competition from motor carriers, yet forced railroads to continue subsidies to agricultural shippers and rural areas with no source of subsidies.[12]

---

[10] The watershed year in the reform process was 1980, with the passage of the Staggers Act, which liberalized railroad regulation, and the Motor Carrier Act. The impetus for change came from President Jimmy Carter, who appointed Dr. Darius Gaskins, a professor of economics at the University of California, Berkeley, as Chair of the Interstate Commerce Commission. Even as Congress deliberated over the reform legislation, Cairman Gaskins immediately moved to modify Commission policies within the limits of the then existing statutes.

[11] Keeler, T.D., Railroads, Freight, and Public Policy Brookings, Washington, D.C., 1983, pp. 28-29 discusses this policy. Evidence that rail costs are substantially lower than truck costs for many commodities is provided by Keeler (same cite) p. 76. Moreover, using short-run variable costs will provide even lower estimates of rail costs. The formula designed by the Interstate Commerce Commission produces cost variability in the 50 to 60 percent range

[12] Since the Smith Act of 1926, the Commission enforced low rail rates for agricultural commodities, subsidized - in theory - by high rates on high value commodities. Commission policy also made it extremely difficult, and, hence, extremely rare, for a rail carrier to abandon low density branch lines, no matter how much money it was losing on the service. In other words, the Commission continued to enforce a "universal service obligation" on rail carriers, even though competition eroded, then eliminated, the means of meeting that obligation. See Robert G. Harris, "Economic Analysis of Light Density Rail Lines," THE LOGISTICS AND TRANSPORTATION REVIEW, 16(1), Winter 1980.

After a decade or more of physical decline and financial strife, Congress and the Interstate Commerce Commission finally responded to the changed economic conditions and competitive realities. Those regulatory reforms have revitalized the rail industry, brought down rail rates in real terms, restored the industry's financial health, induced substantial investment in network upgrades, stimulated rapid technological innovation and deployment, and shifted large volumes of truck traffic off the highways and on to far more efficient intermodal trains.[13] Shipper surveys reveal that most customers are delighted with their newfound freedom to bargain, negotiate and contract for services, and with the significant and continuing improvements in rail service quality.[14]

The parallels between the regulation of railroads and local exchange carriers provide some important lessons for telecommunications policies and price cap reforms. First, the myth of monopoly pervaded the rail industry long after the demise of its monopoly power, just as it apparently is in the case of local exchange carriers. Second, the competitors of railroads played a major role in sustaining regulatory policies long after they had become counter-productive because those policies were a crucial source of competitive advantage for motor carriers, just as LEC competitors now seek to retain policies that inhibit LECs from meeting them fairly in the marketplace. Third, the structure of rail rates, incorporating rate averaging, fully distributed costs and cross-subsidies, was not sustainable in a competitive environment, just as the current structure of telephone prices are not. Fourth, while regulators based their policies on intramodal competition, the most powerful market forces were intermodal competition, just as it is likely to be in telecommunications, as LECs, IXCs, cable operators, cellular carriers, satellite systems and other modes of communications compete to meet customers needs.

---

[13] See Clifford Winston, Thomas M. Corsi, Curtis M. Grimm, and Carol A. Evans, The Economic Effects of Surface Freight Deregulation Brookings, Washington, D.C., 1990. These authors have conducted the most comprehensive study of the effects of both rail and truck deregulation, employing a counterfactual methodology. According to this source, the railroads reaped annual profit gains of $2.9 billion dollars per year (1988 dollars) from deregulation, with cost savings of over $3 billion dollars due to deregulation (pp. 15-41).

From 1971-1980, railroad return on equity averaged less than 3%. By 1979, almost one-fourth of Class I rail mileage was in bankruptcy. Since Staggers, not one major railroad has gone bankrupt and the financial condition of the industry has improved dramatically. See Mitchell E. MacDonald, "Rails Climb Back into the Ring," TRAFFIC MANAGEMENT, December 1993, pp. 40-41.

In addition, according to the Interstate Commerce Commission, ROE for Class I railroads in 1993 was 9.38%. See "Class I Railroad Financial Data," ICC, Office of Economic and Environmental Analysis, May 1994.

[14] See Curtis M. Grimm and Ken G. Smith "The Impact of Rail Regulatory Reform on Rates, Service Quality, and Management Performance: A Shipper Perspective," LOGISTICS AND TRANSPORTATION REVIEW vol. 22, No. 1, 1986, pp. 57-68. Shippers rated rail rates and service quality in terms of speed of service, reliability, loss and damage and car supply significantly higher in the Post-Staggers period as compared to Pre-Staggers. Also, according to the Winston, et al study cited above, p. 28, shippers have received economic benefits from rail deregulation of more than $6 billion dollars annually (1988 dollars), driven by improvement in service quality.

The final lesson from the rail experience is the importance of modifying policies before it is too late and thus, too costly. Market forces will, sooner or later, simply overpower obsolete policies. In a market economy, investors, customers, managers and employees will "vote with their dollars" against policies that distort market outcomes. As the rail case shows, however, the difference between changing policies sooner rather than later is enormous. To be sure, local exchange carriers are, for the foreseeable future, financially healthy and able to fund investments in upgrading their networks. The cautionary lesson of the rail experience is that we cannot merely assume that this will continue to be true. Nor is there any need to wait: the Commission can and should act now by adopting effective transition mechanisms that smooth the way for full and open competition.

E. Adaptive Price Cap Reforms Will Promote the National Information Infrastructure

In surface freight transportation, the harmful effects of non-adaptive regulation were enormous, but largely domestic. In the 1990's, "domestic" telecommunications will have enormous impact on the competitiveness of US industries as well. ***By adopting policies that stimulate healthy competition and private investment, the Commission can help the nation achieve both the upstream and downstream benefits,*** as explained by Dr. Laura Tyson, Chair of the President's Council of Economic Advisors:

> "Many of the industries that are the strongest candidates for strategic status are high-technology industries that generate significant knowledge and technological spillovers for the entire economy. These spillovers mean that the total economic benefits of the industries in question exceed the private benefits. In the absence of government promotional policies, there is no reason to assume that private decision makers, motivated by market signals and private concerns, will invest enough or move quickly enough to capture the social benefits that result from these spillovers."[15]

In the context of a global economy, Dr. Tyson articulates the rationale for government policies to stimulate investment in strategic, high technology industries (including, specifically, telecommunications):[16]

> "As theory suggests and empirical evidence confirms, success in high technology industries bestows national benefits on productivity, technology development, and high wage job creation. As a consequence, such industries are major building blocks of national competitiveness."[17]

My own work agrees with Dr. Tyson's policy rationale for strategic industries and the identification of telecommunications as a strategic industry, while cautioning against a misinterpretation of the policy implications:

---

[15] Tyson, Laura, "Business, Economics, and the Oval Office - Advice to the New President and Other CEOs," Harvard Business Review, 1988, v.66, n.6, p.106.

[16] Tyson, Laura, Who's Bashing Whom? Trade Conflict in High Technology Industries, Institute for International Economics, Washington, D.C., November 1992, p. 21.

[17] Ibid., p.2.

> "One of the main problems with the term 'strategic industry' is that it immediately conjures up images of 'industrial policy,' of targeting large public subsidies for investment or R&D in the industry in question and/or of trade protectionism. That is not what I have in mind. The question is not, however, whether we will have industry policies, but what those policies will be. We have, and will continue to have, public policies with very significant effects on telecommunications services, its suppliers, and its users. Antitrust, regulation, government procurement, taxation, and trade policies directly affect the evolution of the telecommunications industries, the dynamics of competition and technological change in those industries, and the competitiveness of telecommunications equipment suppliers and users in their respective markets. ***The chief implication of the strategic nature of telecommunications is that policy makers should take far greater account of the dynamic consequences of policy and implementation decisions***."[18]

Indeed, precisely because the US does not practice classical "industrial policy" by expending large sums of public funds on targeted industries, it is all the more important that the Commission adopt policies that will attract sufficient private investment in strategic industries. Given the positive spillovers from telecommunications infrastructure, public policies should promote, at minimum, the market efficient level of investment.[19] That can only be accomplished by adopting policies that are premised on the dynamics of change, encourage and reward innovation, and remove regulations that inhibit the deployment of new technologies and the delivery of new services.

A recent report by the Council of Economic Advisers which analyzes the economic benefits of the Administration's legislative proposals for Telecommunications agrees with this conclusion.

> "The telecommunications industry plays a crucial role in our economy. . . . Even without new legislation, the vast opportunities created by advances in communications and information technology will likely transform the economy and the way we live and work. . . . The Administration's legislative proposals will accelerate the rate at which the telecommunications and information revolution arrives in three ways: by reducing uncertainty about the course of regulation, by promoting competition throughout the telecommunications and information industries, and by providing a mechanism for removing existing regulatory restrictions as the development of competition makes them unnecessary."[20]

The report also estimates the likely benefits from the administrations proposals, the principles behind which are consistent with the price cap reforms proposed by USTA. Estimated benefits include a potential cumulative gain in GDP of $100 billion over the next decade and 500,000 new

---

[18] Harris, Robert G., "Telecommunications Services as a Strategic Industry: Implications for United States Policy," in Competition and the Regulation of Utilities, Michael A. Crew, editor. Kluwer Academic Publishers: Boston, 1990.

[19] The creation of positive spillovers would also justify the use of targeted subsidies to promote adoption of telecommunications technologies, for example "demonstration grants" to schools.

[20] Economic Benefits of the Administration's Legislative Proposals for Telecommunications, Council of Economic Advisers, June 14, 1994, p. 2-3.

employment opportunities during the years 1994 to 1996.[21] These numbers are consistent with benefits that would result from the implementation of USTA's price cap reform proposals as estimated by the WEFA Group.[22]

F. LEC Competitors Understate Current and Future Competition in Access Services

In their comments, CAPs and IXCs argue that full local exchange competition is needed before relaxing LEC regulation of interstate access. They argue that there is no more than *de minimis* competition in access services and that competitive access providers are at an inherent disadvantage, given the ubiquitous networks of LECs. Their arguments are both conceptually and empirically mistaken. ***Historical market share, especially as defined and measured by LEC competitors, is a highly biased measure of competition in access services, because it does not account for the "Schumpeterian" forces of rapid technological change;[23] does not account for state regulation of LECs and their franchise obligations; fails to include all sources of supply; and exaggerates the implications of LECs' "ubiquitous" networks.***

1. Historical Market Share is a Biased Measure of Competition in a Dynamic Market

In their references to the use of market shares in the Justice Department's Merger Guidelines, commenters conveniently fail to mention other key parameters for assessing market power in those same guidelines, especially (a) the height of entry barriers; (b) the rate of change in market share; (c) the rate of technological change; and (d) the demonstrated effects of competition on prices and service quality. One must consider these factors as well when assessing whether or not LECs have market power.

a. The incredible rate of entry of CAPs into access and local exchange services provides the strongest possible evidence that entry barriers have fallen rapidly and dramatically. The rate of entry and expansion by CAPs is, to my knowledge, virtually unmatched in any other mature industry. While entry has occurred in newly emerging industries at these rates (e.g., personal computers, peripherals and software), it is extremely rare in an industry as "mature" as local exchange telephone.

b. Though it is impossible to measure rate of change in market share precisely, given the lack of data reporting requirements for CAPs and IXCs, ***the rate of entry and capital investment in building access and local exchange networks suggests that market shares are changing very rapidly.*** Economically rational managers and investors simply do not rapidly invest capital when they are not achieving results, i.e., attracting business.

---

[21] Ibid, p. 8-9.

[22] See The Economic Impact of Revising the Interstate Price Cap Formula for the LECs, the WEFA Group, Attachment 7 to the United States Telephone Association Comments.

[23] Joseph Schumpeter argued forcefully that the competition that really matters - the "destructive gales of change" - derives from generational changes in technologies that break down existing industry structures and eliminate existing sources of competitive advantage. See J.A. Schumpeter, Capitalism, Socialism and Democracy, Chap VII.

c. As to the rate of technological change, it is phenomenal. The digitization of switching and transmission, the deployment of fiber optics, the use of high-powered computers for network management control, and many other ***technological changes give new entrants a significant advantage over incumbents, since they can employ the best technology available at the time of their entry***. This advantage of new entrants over LECs is compounded because regulated depreciation rates have generated a huge unamortized investment in obsolete technologies for the LECs.

d. ***If, as LEC competitors contend, there is no real competition in access services, it would make no economic sense for LECs to lower their access prices so substantially***. Yet LECs lowered their access prices by $1.7 billion in 1993, for accumulative price reductions of $5.1 billion through 1994. Nor would it make any sense, if there were no competition, for LECs to have set their prices well below the price caps allowed under the current scheme. Yet, LECs have set prices that are, in terms of accumulative revenues, $1.1 billion below the level allowed under the price caps. If it is true that actions speak louder than words, the actions of LECs to lower their access prices speaks of competition. Likewise, the actions of CAPs in causing these significant price reductions also speaks of real, and increasing, competition in access services. LECs have also responded to rapidly increasing competition by upgrading service quality, mostly through deployment of fiber optic technology which improved service delivery intervals, trouble resolution time frames, and network reliability standards. The LECs more recently have begun to create "self-healing" network services and to offer Switched Multimegabit Data Service and frame relay trials.[24] Unfortunately, LEC efforts to respond to competition by offering the new services customers want have been severely hampered by the Commission's rigid codification of services and, frequently, long delays.

2. Historical Market Share Data Is Biased Due to Regulation of LECs

Historical market share is also a biased indicator of market power because LECs are so highly regulated. There is a fundamental difference between an unregulated firm and a highly regulated LEC, namely, the universal service obligation. An unregulated firm only sells its services when it makes a profit; hence every unit sold, or every dollar of sales, is an indication of its market presence, because it chooses to make those sales. A LEC does not "choose" to make many of its sales -- it is obligated to make them. When prices are less than costs, those sales do not provide any evidence whatsoever of the LEC's "market power"; they merely mean that the LEC is fulfilling its obligation. This conceptual error is compounded when the LEC's competitors do not have the same universal service obligation: if they sell services to a customer, it is only because they expect to make a profit from doing so.

3. Measures of Competition Should Include Self-Supply by IXCs and End Users

In citing the very high share of access services purchased from vendors, LEC competitors are misdefining the market. The market for access services includes all forms of access, including those supplied by users and by IXCs. To count only those services purchased by IXCs from either LECs or CAPs dramatically overstates the market share of LECs. Although there are no known available data to quantify the amount of vertical integration by end users or IXCs into "self-

---

[24] The Yankee Group, 1993, p. 24-5.

supply" of access services, there is evidence that it is substantial.[25] Moreover, CAPs and IXCs have very strong incentives to keep such information private, for it has great strategic value in the regulatory process. If self-supply of access service goes un- or under-reported, LEC competitors are more likely to convince public authorities that LECs retain market power and should be constrained by heavy regulations.

4. ENTRANTS WITH "FOCUS" STRATEGY CAN COMPETE EFFECTIVELY WITH "UBIQUITOUS" LECS

Commenters argue that the LECs' ubiquitous networks give them a substantial competitive advantage, which can be overcome, according to the CAPs and IXCs, only when other vendors also have ubiquitous local exchange networks. That argument is based on a fundamental misunderstanding of competition. ***When one competitor has a "ubiquitous network," it is not necessary for another competitor to have a ubiquitous network to compete effectively***. In Competitive Strategy, Michael Porter delineates three generic strategies for successfully competing.[26] Only two of those strategies, "cost leadership," and "differentiation," require a firm to compete across the broad range of product and geographic space. The third alternative, ***a "focus" strategy, enables a firm to compete successfully by concentrating its efforts on one or several geographic or product "niches" in the marketplace***.

According to the CAPs' and IXCs' theory of competition, Japanese automakers could not have competed with General Motors because, initially, they produced only "sub-compact" autos and had limited dealer networks, whereas General Motors was the "ubiquitous" auto manufacturer, with a full product line from compacts to luxury cars and an extensive dealer network covering the whole country. Not only did the Japanese automakers succeed, but they succeeded precisely because they pursued, initially, a focus strategy, aimed at that part of the market where they could gain a sustainable competitive advantage. Over time, of course, Japanese automakers have expended their product lines and their geographic presence. With the addition of small trucks, sports utility vehicles and full size luxury autos, they now compete successfully across the board. In other words, they employed a focus strategy to gain a strong foothold in the market, then developed and implemented a differentiation strategy, based mainly on product quality differences, over time.

A focus strategy is particularly effective when there is a high degree of market segmentation and when revenues are highly concentrated into relatively small portions of the product lines or geographic space. Both conditions apply to access services, in spades. For those reasons, it is obvious that CAPs are pursuing a focus strategy, aiming their initial geographic and product entry at the most lucrative and, given the regulatory restraints on LECs, the most vulnerable market niches. To a student of competitive strategy, it is inconceivable that they will stop there. Just as did the Japanese automakers, CAPs will expand -- indeed, already have begun to expand -- their geographic presence and their product lines, from special

---

[25] For a more detailed discussion of alternative access suppliers, see Section G.4 below.

[26] Porter, Michael E., Competitive Strategy. New York: The Free Press, 1980

access in the densest urban cores, to switched access, local exchange and interexchange services in urban and suburban areas and in smaller cities.[27]

G. There Is Substantial and Rapidly Increasing Competition in Access Services

Taking into account the issues discussed in the previous section, this section analyzes the degree to which LECs face competition for access services. An objective reading of the evidence demonstrates that competition is real and substantial in many geographic markets, especially for special access services, and that competition is developing at an astonishing rate. These rapidly changing competitive conditions require an adaptive regulatory framework that enables LECs to respond to growing competition.

1. Competition from CAPs

The May 9 report presented detailed evidence of the current operations of competitive access providers in the US. By now, of course, those data are out of date. Table 1 is an update of current CAP operations, as well as a listing of their announced entry and expansion plans. CAPs are currently operating networks in 222 cities and have announced plans to enter 41 more. As they expand their current networks and enter new markets, and as cable systems interconnect to the fiber optic rings of CAPs and/or the tandem switches of IXCs, they will offer full fledged competition to LECs. CAPs have begun to install switches on their networks and thus can provide switched as well as special access services and have formed alliances with cable companies and IXCs to help extend the reach of their networks. MFS has switching capabilities on its network in New York City and has authorization to provide switched services in Chicago and Baltimore (and has plans to install switches on its networks there).[28] Teleport also provides switched services in New York City, Boston, Chicago and San Francisco.[29]

The May 9 report also presented detailed data showing the high degree of concentration of access and other revenues among business customers. As Figures 1a-1g demonstrate, these are the very customers upon which the CAPs have focused their initial entry efforts. Clearly, CAPs choose to build networks where the most promising sales opportunities are. Given that CAPs seek to build networks where revenues are most concentrated, one might wonder why LECs would be willing to offer revenue concentration information publicly. The locations of CAP networks on Figures 1a-1n indicates that CAPs already have access to this information so that LECs are not likely to provide much additional market intelligence to CAPs by publicly showing these maps. It is not surprising that CAPs have access to concentration of revenue information. IXCs have the same information on concentration of access revenues (since access is used for connection to long distance carriers) that LECs do. IXCs have the incentive to promote

---

[27] See Section G.1 below for a more detailed discussion of the location of CAP networks relative to the concentration of access revenues.

[28] See "MFS Intelenet Launches Full Service Phone Company Providing Both Local and Long Distance Services", MFS Communications Company News Release, October 5, 1993.

[29] "Teleport Communications Prepares for Local Service Offensive," Local Competition Report, October 4, 1993.

competition for access services and thus have the incentive to provide this revenue concentration information to CAPs.[30] AT&T's vice president for network services has stated his company's commitment to obtaining access from a variety of local suppliers.[31]

2. COMPETITION FROM CABLE

Yet even these numbers are but a mere hint of even faster entry and greater competition just ahead. Cable operators are now beginning to upgrade their existing networks to provide a broad range of telecommunications services. ***Cable networks are already used for the backhaul of voice and data transmissions for cellular providers and CAPs***. For example, PacTel Cellular Detroit has replaced some BOC-provided local loop circuits with leased cable TV fiber to connect to IXCs' facilities and uses fiber in combination with microwave for its network.[32] In Kansas City, a multi-MSO venture begun in 1988 and known as FiberNet provides data and voice services to interexchange carriers, several airline reservation subsidiaries, and financial brokerage houses and other large firms.[33]

Cable companies have also been actively involved in the development of PCS technologies. Comcast is conducting trials in five cities, Hauser Communications is testing in five cities, Prime II is testing in six cities, Time Warner is testing in five cities, United Artists Cable is testing in five cities, Viacom is testing in five cities, Cable USA is testing in four cities, and Cablevision is testing in four cities. Cable companies hold over 10% of the 187 experimental PCS licenses issued by the FCC.[34] On November 16, 1993, Cablevision Systems, Continental and Time Warner interconnected their networks to demonstrate the feasibility of a CATV partnership to create regional PCS networks. Calls were connected between downtown Boston and several outlying suburbs using wireless facilities to connect the cable operators' networks. Intersystem transport switching and support was provided by Teleport.

Moreover, ***cable companies are beginning to provide telephony services directly over their cable networks***. Time Warner has developed plans to offer telephony services in Rochester. Cablevision (in conjunction with AT&T) won a competitive bid over Nynex to provide local telephone and cable services to Long Island University's C.W. Post campuses. Cablevision also continues to build a fiber optic based network on Long Island and in New York City that has the capability of offering video-on-demand, interactive games and an alternative phone service to

---

[30] Investment analysts have stated that, "the growth of access carriers is being encouraged, if not orchestrated, by the long-distance companies." Sanford Bingham, "A 2d Divestiture Looms in U.S.; Small Access Carriers Challenging Local Bell Monopolies," INTERNATIONAL HERALD TRIBUNE, October 7, 1991.

[31] "Alternative Access Business Examined at NCTA," COMMUNICATIONS DAILY, May 6, 1992, pp. 5-6.

[32] Peter W. Huber, The Enduring Myth of the Local Bottleneck, March 14, 1994, p. 39.

[33] Fred Dawson, "In Teleport's Shadow," CABLEVISION, September 21, 1992, p. 31.

[34] COMMUNICATIONS DAILY, November 18, 1993.